UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,762	03/10/2004	David Lee Applegate	ATT 2003-0062	4005

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EXAMINER
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ART UNIT	PAPER NUMBER
2609	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/797,762	APPLEGATE ET AL.
	Examiner	Art Unit	
	Henry Lam	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>10 March 2004</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-27</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-6, 9-14, 17-19, and 21-27</u> is/are rejected.

7) ☒ Claim(s) <u>7,8,15,16 and 20</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-SB/08)
    Paper No(s)/Mail Date <u>10 March 2004</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Detailed Action

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

> (b) the invention was patented or described in a printed publication in this or a
>
> foreign country or in public use or on sale in this country, more than one year
>
> prior to the date of application for patent in the United States.

2.   Claims 1-6, 9-14, 17-19, and 21-27 are rejected under 35 U.S.C. 102(b) as being

anticipated by **Narvaez-Guarnieri et al** (US 6,098,107 A)

> For Claims 1-6, 9-14, 17-19, and 21-27, **Narvaez-Guarnieri** teaches a method of
>
> configuring a traffic network, comprising:
>
> obtaining information about the network nodes and links (column 1, lines 39-44);
>
> identifying possible origin-destination pairs (column 1, lines 39-44);
>
> computing an optimum oblivious ratio of the network (column 2, lines 34-41); and
>
> configuring the network in accord with the computed oblivious ratio (column 3,
>
> lines 24-50);

wherein the optimal oblivious ratio is computed by partitioning the network to 2-edge connected components and taking the maximum of the oblivious ratio over those components (column 3, lines 33-40);

wherein the optimal oblivious ratio is computed using linear constraints on origin-destination pair demands (column 5, lines 5-15);

wherein obtaining the optimum oblivious ratio is performed by solving a linear program (column 5, lines 15-24);

wherein the linear program is based on a reduced set of input topologies, wherein the input topologies where path diversity is not possible are removed (column 7, lines 19-32);

wherein the linear program is based on a reduced set of input topologies, wherein degree-one nodes are removed (column 4, lines 27-36, column 5, lines 66-67, and column 6, lines 1-27).

A method of configuring a traffic network, comprising:

obtaining information about the network nodes and links (column 1, lines 39-44);

identifying possible origin-destination pairs (column 1, lines 39-44);

computing an optimum network routing (column 8, lines 3-17); and

configuring the network in accord with the computed optimum network routing (column 2, lines 18-27);

wherein the optimum network routing is computed by partitioning the network to 2-edge connected components and taking the maximum of an oblivious ratio over those components (column 7, lines 19-32);

wherein the optimum network routing is computed using linear constraints on origin-destination pair demands (column 1, lines 39-44);

wherein obtaining the optimum network routing is performed by solving a linear program (column 5, lines 15-24);

wherein the linear program is based on a reduced set of input topologies, wherein the input topologies where path diversity is not possible are removed (column 7, lines 19-32);

wherein the linear program is based on a reduced set of input topologies, wherein degree-one nodes are removed (column 4, lines 27-36, column 5, lines 66-67, and column 6, lines 1-27).

A traffic network comprised of:

a plurality of routers that support path-based routing and of a plurality of links that connect the plurality of routers (column 1, lines 10-15), wherein each path-based routing is configured in accord with an oblivious routing configuration based on the plurality of routers and links (column 1, lines 39-56), wherein the oblivious routing configuration is derived by identifying possible origin-destination pairs (column 1, lines 39-44), computing an optimum network routing based on linear constraints placed on the origin-destination pair demands (column 8, lines 3-17);, and configuring the path-based routings in accord with the optimum network routing (column 2, lines 18-27);

wherein the linear program is based on a reduced set of input topologies, and

wherein the input topologies where path diversity is not possible are removed (column 7, lines 19-32);

wherein the linear program is based on a reduced set of input topologies and wherein degree-one nodes are removed (column 4, lines 27-36; column 5, lines 66-67; and column 6, lines 1-27).

A traffic network, comprising:

a plurality of network nodes each of which has configurable routing characteristics (column 1, lines 10-15);

means for obtaining information about the network (column 1, lines 58-60);

means for identifying possible origin-destination pairs of network nodes (column 1, lines 39-44);

means for computing an optimum oblivious ratio of the network (column 2, lines 34-41); and

means for configuring the network nodes in accord with the computed oblivious ratio (column 2, lines 18-27);

wherein the optimal oblivious ratio is computed by partitioning the network to 2-edge connected components and taking the maximum of the oblivious ratio over those components (column 3, lines 33-40);

wherein the optimal oblivious ratio is computed using linear constraints on origin-destination pair demands (column 8, lines 3-17);

wherein the optimum oblivious ratio is obtained by solving a linear program (column 5, lines 15-24).

A traffic network, comprising:

a plurality of network nodes, each of which has configurable routing characteristics (column 1, lines 10-15);

obtaining information about the network nodes and routing characteristics (column 1, lines 57-65);

means for identifying possible origin-destination pairs of nodes; means for computing an optimum network routing (column 2, lines 34-41); and

means for configuring the nodes in accord with the computed optimum network routing(column 2, lines 18-27);

wherein the means for configuring the nodes computes the optimum network routing by solving a linear program (column 5, lines 15-24); and

wherein the linear program is based on a reduced set of input topologies, wherein possible input topologies where path diversity is not possible are not used (column 7, lines 19-32).

Allowable Subject Matter

3.   Claims 7 & 8, 15 & 16, and 20 are objected to as being dependent upon a rejected base claims, but would be allowable if written in dependent from including all of limitations of the base claim any intervening claims.

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mitra et al. (5,426,635) and Liron (5,740,164) are all cited to show systems which are considered pertinent to the claimed invention.
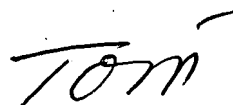
5.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Lam whose telephone number is (571) 270-3122. The examiner can normally be reached on Monday through Thursday 8:00AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on (571) 272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HL

DANG T. TON
SUPERVISORY PATENT EXAMINER